



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

AK

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,484	12/26/2001	Patrick Y. Maeda	D/A1171	7917

7590 11/03/2003

Patent Documentation Center  
Xerox Corporation  
Xerox Square 20th Floor  
100 Clinton Ave. S.  
Rochester, NY 14644

EXAMINER
----------

SPEARS, ERIC J

ART UNIT	PAPER NUMBER
----------	--------------

2878

DATE MAILED: 11/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/025,484	MAEDA, PATRICK Y.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Eric J Spears	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 December 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 7, 10, and 14-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 3, lines 2-3 contain the phrase "from or more surfaces" which is not understood. The claim will be examined as if the phrase read "from one or more surfaces". Correction is required.

Claim 7 recites the limitation "every light emitting diode on the printbar" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Regarding Claim 10, line 3 contains the phrase "from or more surfaces" which is not understood. The claim will be examined as if the phrase read "from one or more surfaces". Correction is required.

Claim 14 recites the limitation "all other light emitting diodes" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "all other light emitting diodes" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Claims not specifically mentioned are indefinite due to their dependency from an indefinite base claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Shiota et al. (2002/0134909).

Regarding Claim 1, Shiota teaches a method of calibrating a printer comprising steps of; utilizing a printbar to output an image (Section 9); receiving a signal Sc to recalibrate the printbar; and detecting at a photodetector 160 integrated into said printer, the output of a light emitting diode 110 on the printbar and adjusting a current provided to the light emitting diode until the intensity of light detected by the photodetector matches a reference intensity determined during assembly of the printbar (Sections 51-55).

Regarding Claim 2, Shiota teaches replacing a reference current value stored in memory 13 with a revised reference current value, the revised reference current value indicating the new current provided to the light emitting diode that causes the intensity of light detected by the photodetector to match the reference intensity determined during assembly of the printbar (Sections 54-55).

Regarding Claim 3, Shiota teaches wherein over 50% of the light detected

by the photodetector is light from the LED after being reflected or scattered from or more surfaces of the printbar (it should be noted that most of the light from the printbar 110 would not strike the sensor directly; See Fig. 2).

Regarding Claim 4, Shiota teaches the photodetector 160 is a single strip photodetector running a length of the printbar (See Fig. 2, claim 13).

Regarding Claim 5, Shiota teaches detecting at a second photodetector 160 integrated into said printer, the output of a second Light emitting diode 110 on the printbar and adjusting a current provided to the second Light emitting diode until the intensity of light detected by the second photodetector matches a reference intensity determined during assembly of the printbar (Sections 29, 51-55, 70-82).

Regarding Claim 6, Shiota teaches detecting at a photodetector 160 integrated into said printer, an output of a second Light emitting diode 110 on the printbar and adjusting a current provided to the second Light emitting diode until the intensity of light detected by the photodetector matches a second reference intensity determined during assembly of the printbar (Sections 29, 51-55, 70-82).

Regarding Claim 7, Shiota teaches wherein the operation of detecting at a photodetector the output of a light emitting diode on the printbar and comparing the output to a corresponding reference intensity is repeated for every light emitting diode on the printbar (Sections 70-82).

Regarding Claim 8, Shiota teaches a method of calibrating a printer comprising operations of: utilizing a printbar to output an image (Section 9); receiving a signal Sc to recalibrate the printbar 110; detecting at a photodetector 160 integrated into said

printer, the output of a group of light emitting diodes on the printbar and adjusting a current provided to the group of Light emitting diodes 110 until the intensity of light detected by the photodetector matches a reference intensity determined during assembly of the printbar (Sections 51-55). It should be noted that each of the red green and blue sections of the printbar is composed of LEDs (Section 29).

Regarding Claim 9, Shiota teaches replacing a reference current value stored in memory 13 with a revised reference current value, the revised reference current value indicating the new current provided to the light emitting diode that causes the intensity of light detected by the photodetector to match the reference intensity determined during assembly of the printbar (Sections 54-55).

Regarding Claim 10, Shiota teaches wherein over 50% of the light detected by the photodetector is light from the LED after being reflected or scattered from or more surfaces of the printbar (it should be noted that most of the light from the printbar 110 would not strike the sensor directly; See Fig. 2).

Regarding Claim 11, Shiota teaches the photodetector 160 is a single strip photodetector running a length of the printbar (See Fig. 2, claim 13).

Regarding Claim 12, Shiota teaches detecting at a second photodetector 160 integrated into said printer, the output of a second Light emitting diode 110 on the printbar and adjusting a current provided to the second Light emitting diode until the intensity of light detected by the second photodetector matches a reference intensity determined during assembly of the printbar (Sections 29, 51-55, 70-82).

Regarding Claim 13, Shiota teaches detecting at a photodetector 160 integrated into said printer, an output of a second Light emitting diode 110 on the printbar and adjusting a current provided to the second Light emitting diode until the intensity of light detected by the photodetector matches a second reference intensity determined during assembly of the printbar (Sections 29, 51-55, 70-82).

Regarding Claim 14, Shiota teaches a method of calibrating a printer comprising steps of; switching on one light emitting diode 110 and switching all other light emitting diodes off 110 (it should be noted that each of the red green and blue sections of the printbar is composed of LEDs (Section 29)); detecting using a detector 160 the output of the one light emitting diode; comparing the detected output of the detector with a stored value, the stored value corresponding to a previous output of the detector measured during assembly of the printbar; and adjusting the power supplied to the one light emitting diode until the output of the detector matches the stored value (Sections 51-55, 70-82).

Regarding Claim 15, Shiota teaches storing the amount of power supplied to the one Light emitting diode when the output of the detector matches the stored value (Sections 54-55).

Regarding Claim 16, Shiota teaches repeating the detecting and comparing operations for a second light emitting diode on the printbar (Sections 51-55, 70-82).

Regarding Claim 17, Shiota teaches a method of calibrating a printer comprising steps of; switching on a group of light emitting diodes 110 and switching all other light emitting diodes off; detecting using a detector 160 the output of the group of light

emitting diodes; comparing the detected output of the detector with a stored value, the stored value corresponding to a previous output of the detector measured during assembly of the printbar; and adjusting the power supplied to the group of light emitting diodes until the output of the detector matches the stored value (Sections 51-55, 70-82). It should be noted that each of the red green and blue sections of the printbar is composed of LEDs (Section 29).

Regarding Claim 18, Shiota teaches storing the amount of power supplied to the one Light emitting diode when the output of the detector matches the stored value (Sections 54-55).

Regarding Claim 19, Shiota teaches wherein the stored value measured during assembly of the printbar was determined by using the detector to measure the output of the group of light emitting diodes during assembly of the printer (Sections 53-55).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kato (6,075,233) teaches a current controller in an imaging apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Spears whose telephone number is (703) 306-



Application/Control Number: 10/025,484  
Art Unit: 2878


Page 8

0033. The examiner can normally be reached on Monday-Friday from 10:00am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (703) 308-4852. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

EJS  
10/17/03

  
**Quat Le**  
**Primary Examiner**